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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/827,027

04/19/2004

Santtu Naukkarinen

042933/276881

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10/19/2006

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EXAMINER

APANIUS, MICHAEL

ART UNIT

PAPER NUMBER

3736

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/827,027	<b>Applicant(s)</b> NAUKKARINEN, SANTTU	
	<b>Examiner</b> Michael Apanius	<b>Art Unit</b> 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/19/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20040419</u>  | 6) <input type="checkbox"/> Other: ____                           |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "activity detection application 23" and "database 25" (i.e. see paragraph bridging pages 7 and 8).
2. The drawings are further objected to because it appears that "120" in figure 7 should be --96--. In addition, the lines of figures 2A-2E are not clean or uniformly thick and well-defined. Furthermore, figures 3A, 3B and 6 are not clear because the figures are too dark.
3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The disclosure is objected to because of the following informalities: at page 19, lines 10-13 and page 20, lines 7-9, the blanks need to be filled in with the appropriate reference. Appropriate correction is required.

### ***Claim Objections***

5. Claims 3-6 are objected to because of the following informalities: it appears that claim 3 should depend from claim 2 to provide appropriate antecedent basis for "the switching logic". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 7, 17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Engira (US 5,153,584). Engira discloses a terminal comprising: data transfer circuitry (44 in figure 4) capable of transmitting data; tactile circuitry (i.e. 30 in figure 4)

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capable of measuring at least one condition of a user; and a conductor (6 in figure 4) alternately coupled to both the data transfer circuitry and the tactile circuitry, the at least one conductor being capable of communicating with the data transfer circuitry to function as an antenna, and capable of alternately communicating with the tactile circuitry to function as a tactile interface. A housing (see figure 1) supports the conductor.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-10, 16-24, 30-37 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwabuchi et al. (US 6,327,495) in view of Sasse et al. (US 6,945,935).

10. Iwabuchi discloses a terminal comprising: data transfer circuitry (25 in figure 2) capable of at least one of transferring data and receiving data; tactile circuitry (22, 23) capable of measuring at least one condition of a user; and at least one conductor (A, B, C and/or D) coupled the tactile circuitry, the at least one conductor being capable of communicating with the tactile circuitry to function as a tactile interface.

11. In regards to claim 2, switching logic (S3, S18 in figure 4) is coupled to the tactile circuitry, data transfer circuitry and at least one conductor, wherein the switching logic is

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capable of operating to permit the data transfer circuitry to communicate with an antenna, or permit the tactile circuitry to communicate with the at least one conductor functioning as a tactile interface.

12. In regards to claim 3, a controller (21 in figure 2) is coupled to the switching logic and is capable of controlling operation of the switching logic.

13. In regards to claim 4, the controller is capable of controlling the switching logic to permit the tactile circuitry to communicate with the at least one conductor functioning as a tactile interface when the tactile circuitry is set to operate.

14. In regards to claims 5 and 6, the controller is capable of determining when the tactile circuitry is set to operate based upon a user input (9 in figure 1).

15. In regards to claim 7, a housing (figure 1) supports the at least one conductor.

16. In regards to claim 8, the tactile circuitry is capable of communicating monitoring signals (see 22 in figure 2) to a portion of the user's body via the at least one conductor operating as a tactile interface such that at least one condition of the user is capable of being computed in response to communication of the monitoring signals.

17. In regards to claim 9, the tactile circuitry is capable of communicating monitoring signals to a portion of the user's body such that a resistance (S12 in figure 4) to the communication of the monitoring signals is capable of being computed, and such that at least one parameter associated with the user's body fat is capable of being computed based upon the resistance.

18. In regards to claim 10, the at least one parameter comprises a percent body fat ("fat rate" in figure 5).

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19. In regards to claim 16, the tactile circuitry is capable of maintaining the monitoring signal at a substantially constant amperage (see column 5, lines 51-53).

20. In regards to claims 17-24, 30-37 and 43, the associated method steps are similarly disclosed as noted above. In regards to claims 31-37 and 43, the controller (21) executes the steps based upon a computer program product comprising a computer-readable storage medium (24) having computer readable program code portions stored therein.

21. However, Iwabuchi does not expressly disclose that the at least one conductor is also capable of communicating with the data transfer circuitry to function as an antenna.

22. Sasse teaches integrating an antenna with the leads/conductors of electrodes for the purpose of reducing the required size of a unit (column 6, lines 60-63).

23. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have enabled the at least one conductor of Iwabuchi to also communicate with the data transfer circuitry to function as an antenna as taught by Sasse in order to reduce the overall size of the terminal.

24. Claims 11, 12, 14, 15, 25, 26, 28, 29, 38, 39, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwabuchi et al. (US 6,327,495) as modified by Sasse et al. (US 6,945,935), as applied to claims 1-10, 16-24, 30-37 and 43 above, and further in view of Petrucelli et al. (US 6,292,690).

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25. Iwabuchi as modified by Sasse does not expressly disclose measuring fat mass or any parameters of the monitoring signal. Iwabuchi does state that the body fat measurement is omitted since it has been well known (column 5, lines 40-42).

26. Petrucelli teaches measuring fat mass (column 10, line 7), and using a sinusoidal signal having a frequency of 50kHz and amperage less than 1mA for the purpose of reducing skin capacitance (paragraph bridging columns 3 and 4).

27. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have measured fat mass and used the monitoring signal parameters as taught by Petrucelli in the invention of Iwabuchi as modified by Sasse because it is routine to apply well known techniques to measure body impedance and to reduce skin capacitance.

28. Claims 13, 27 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwabuchi et al. (US 6,327,495) as modified by Sasse et al. (US 6,945,935), as applied to claims 1-10, 16-24, 30-37 and 43 above, and further in view of Sarrazin et al. (US 6,208,890).

29. Iwabuchi as modified by Sasse does not expressly disclose a square wave signal. Iwabuchi does state that the body fat measurement is omitted since it has been well known (column 5, lines 40-42).

30. Sarrazin teaches using a square wave signal in a body impedance measurement (abstract).



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31. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used a square wave signal as taught by Sarrazin in the invention of Iwabuchi as modified by Sasse because it is routine to apply well known techniques to measure body impedance.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DePedro et al. (US 3,882,277), Cadell et al. (US 4,958,645), and Carter et al. (US 6,526,310) disclose integrating an antenna with a lead or an electrode. Gallup et al. (US 5,372,141) and Lee et al. (US 7,031,750) disclose impedance measurement devices with wireless components.


33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Apanius whose telephone number is (571) 272-5537. The examiner can normally be reached on Mon-Fri 8am-4:30pm.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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